

Factor Fully		
$2x(x-5) + 7(x-5)$	$42x^2 - 18x$	$x^2 - 13x + 36$
$9a^2b^4 - 3a^2b^2 + 18a^4b^6$	$x^2 + 9x + 14$	$4x^2 - 15x - 4$

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$y = a(x-s)(x-r)$

Factor Fully

$2x(x-5) + 7(x-5)$ $(x-5)(2x+7)$ $(5,0) (-\frac{7}{2},0)$	$42x^2 - 18x$ GCF $6x(7x-3)$ $(0,0) (\frac{3}{7},0)$	$x^2 - 13x + 36$ AC $(x-4)(x-9)$ $(4,0) (9,0)$
$9a^2b^4 - 3a^2b^2 + 18a^4b^6$ $3a^2b^2(3b^2 - 1 + 6a^2b^4)$	$x^2 + 9x + 14$ AC $(x+7)(x+2)$ $(-7,0) (-2,0)$	$4x^2 - 15x - 4$ AC $(4x+1)(x-4)$ $(-\frac{1}{4},0) (4,0)$

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Boris throws a ball upward from the top of a cliff to the water. The height of the ball above the base of the cliff is modeled by $h = -5t^2 + 15t + 50$, where h is the height in metres and t is the time in seconds.

- How high is the cliff?
- How many seconds does it take for the ball to hit the water?
- What is the maximum height of the ball?
- When does the ball reach its maximum height?

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Boris throws a ball upward from the top of a cliff to the water. The height of the ball above the base of the cliff is modeled by $h = -5t^2 + 15t + 50$, where h is the height in metres and t is the time in seconds.

a) How high is the cliff? $t=0$
 $h=50$

b) How many seconds does it take for the ball to hit the water?

c) What is the maximum height of the ball?

d) When does the ball reach its maximum height?

$h = -5t^2 + 15t + 50$
 $h = -5(t^2 - 3t - 10)$
 $h = -5(t^2 - 3t + 2 - 10)$
 $h = -5(t(t-3) + 2(t-5))$
 $h = -5(t-5)(t+2)$
 $(5,0) (-2,0)$

The ball hits the water at 5 sec

$\frac{5t-2}{2}$
 $h = -5(\frac{3}{2})(\frac{7}{2} + 2)$
 $h = -5(\frac{3}{2})(\frac{13}{2})$
 $h = -5(\frac{39}{4})$
 $h = -\frac{195}{4}$
 $h = -48.75$

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Complete to study

Chapter 4 Self Test p. 242q.3-9

Practice Questions p. 240 and 241

q. 6,9,10,11,13,17,19

Apr 25-10:02 AM